Inventors: Shaw et al.   PATENT APPLICATION
Serial No. 10/662,171   Navy Case 95,758

Amendments to the Claims:

1-17. (Cancelled)

18.   (New) A method of building and maintaining an object-oriented database from a vector product
format (VPF) database, said method comprising:

instantiating objects of the object-oriented database, using the VPF database;

initializing spatial and non-spatial feature data of the object-oriented database;

spatially indexing data among objects across hierarchical levels of the object-oriented database;

updating data of the object-orientated database; and

exporting contents of the updated object-oriented database to the VPF database.

19.   (New) A method of building and maintaining an object-oriented database from a vector product
format (VPF) database, said method comprising:

instantiating objects of the object-oriented database, using the VPF database;

initializing spatial and non-spatial feature data of the object-oriented database;

spatially indexing data among objects across hierarchical levels of the object-oriented database;
and

updating spatial and non-spatial data.

20.   (New) The method according to claim 19, wherein said initializing spatial and non-spatial
feature data creates a feature level having

non-spatial data which provides characteristic properties of each feature, and

spatial data, including primitive data and topological information, which provides spatial
relationships between a feature object and other feature objects within a specified coverage; and

wherein related non-spatial and spatial data are directly accessible from the feature object.

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21.   (New) The method according to claim 20, wherein said updating spatial and non-spatial data includes adding, changing, and deleting feature, primitive, and topological data within the database and further includes updating all object links referencing the feature, primitive, and topological data.

22.   (New) The method according to claim 19, wherein said spatially indexing data is applied to one or more databases whose format comprises:

    a flat file;

    a raster product format;

    a vector product format; or

    a text format.

23.   (New) The method according to claim 22, further comprising retrieving data objects matching a user-specified query based on at least one of the following data characteristics:

    feature attributes;

    geometrical constraints;

    topological constraints; and

    geographical constraints.

24.   (New) The method according to claim 23, wherein said retrieving data objects includes retrieving:

    a flat file;

    a raster image;

    a VPF feature; or

    text data.

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